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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,249	12/14/2001	Donald C. D. Chang	PD-201007	1633

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THE DIRECTV GROUP INC
PATENT DOCKET ADMINISTRATION RE/R11/A109
P O BOX 956
EL SEGUNDO, CA 90245-0956

EXAMINER	
DOAN, PHUOC HUU	

ART UNIT	PAPER NUMBER
2684	

DATE MAILED: 09/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/017,249	CHANG ET AL.	
	Examiner	Art Unit	
	Phuoc H Doan	2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *5-12 and 16-20* is/are allowed.

6)☒ Claim(s) *1-4 and 13-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 3.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 4, and 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Monte et al. (U.S Patent No: 5,664,006).

As to claim 1, Monte et al. disclose a mobile communication system comprising: a first user terminal (Fig. 1, items 13A, col. 3, lines 9-11); a plurality of platforms in communication with said first user terminal to transfer a plurality of communication signals therebetween (col. 2, lines 34-40); a gateway station (Fig. 4, item 18) in communication with said plurality of platforms (Fig. 1, items 12) for transferring said plurality of communication signals therebetween (col. 4, lines 4-7); and a processing center (Fig. 4, item 38) in communication with said gateway station (col. 6, lines 39-47), said processing center determining a polystatic triangulation position for said first user terminal and redirecting a satellite beam in response to said determined position of said first user terminal (col. 10, lines 50-63, and col. 12, lines 41-57).

As to claim 2, Monte et al. further disclose that comprising: a customer network in communication with said processing center (col. 6, lines 25-47), said customer network relaying communication signals between said first user terminal and a second user terminal (col. 4 through col. 5, lines 65-10).

As to claim 4, Monte et al. further disclose that wherein the mobile communication system is configured such that all of said plurality of communication signals are aggregated at said gateway station (col. 6, lines 25-55).

As to claim 13, Monte et al. disclose that method of determining a position of at least one user terminal (Fig. 1, item 13A, col. 3, lines 9-11) within a mobile communication system, which includes a plurality of satellites (Fig. 1, item 12) having known locations respectively and a gateway station (Fig. 4, item 18), said method comprising: transmitting and receiving a plurality of communication signals between said plurality of satellites and said at least one user terminal (col. 3, lines 9-38); transmitting and receiving said plurality of communication signals between said plurality of satellites and a gateway station (col. 3 through col. 4, lines 62-15); determining a position of said at least one user terminal through the use of polystatic triangulation (col. 10, lines 50-63); redirecting a beam of a satellite in response to said determined position of said at least one user terminal (col. 10, lines 50-63, and col. 12, lines 41-57).

As to claim 14, Monte et al. further disclose that comprising: transmitting and receiving said plurality of communication signals to and from a customer network (col. 4 through col. 5, lines 65-19).

As to claim 15, Monte et al. further disclose that comprising: transmitting and receiving said plurality of communication signals to and from a center network (col. 6, lines 25-65).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Monte et al. in view of David (US Pub. No: 2003/0158656).

As to claim 3, Monte et al. disclose all the limitation of claim 2. However, Monte et al. do not disclose that a center network in communication with said processing center, said center network transferring said plurality of communication signals between said first user terminal and an Internet.

David discloses that a center network in communication with said processing center, said center network transferring said plurality of communication signals between said first user terminal and an Internet (col. 2, paragraph [0024]). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the communication signal with internet of David to the system of Montere et al. in order to expanse the coverage of user terminal.

Allowable Subject Matter

3. Claims 5-12, and 16-20 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

As to claim 5, Monte et al. and David, alone or in combination, do not disclose a mobile communication system comprising: a stratospheric platform having stratospheric platform operations, including creating a plurality of beams within a coverage area, a first beam being directed to at least one user terminal at a first microcell and a plurality of additional beams illuminating microcells immediately adjacent said first microcell; a gateway station transmitting a first ranging signal and a third ranging signal to said at least one user terminal via a first platform, having a first known location and transmitting a second ranging signal and a fourth ranging signal to said at least one user terminal via a second platform having a second known location; said at least one user terminal retransmitting said first ranging signal and said third ranging signal back to said gateway station via said first platform and retransmitting said second ranging signal and said fourth ranging signal back to said gateway station via a third platform, having a third known location; and a processing center in communication with said gateway station determining a first, a second, a third, and a fourth delay corresponding to time differences between transmission and receipt of said first ranging signal, said second ranging signal, said third ranging signal, and said fourth ranging signal respectively; said processing center determining a first position of said user terminal in response to said

first known location, said second known location, and said third known location as well as said first delay and said second delay; said processing center determining a second position, different from said first position, in response to said first known location, said second known location, and said third known location as well as said third delay and said fourth delay, thereby determining movement of said at least one user terminal; said processing center signaling said stratospheric platform via said gateway station to redirect said first beam from said first microcell to a second microcell, in response to said movement.

As to claim 16, Monte et al. and David, alone or in combination, do not disclose a method of determining a position of at least one user terminal within a mobile communication system, which includes a first, a second, and a third satellite having a first, a second, and a third known location respectively, said method comprising: creating a plurality of beams within a coverage area, a first beam directed at the at least one user terminal in a first microcell and a plurality of additional beams illuminating microcells immediately adjacent said first microcell; transmitting a first ranging signal and a third ranging signal to the at least one user terminal via the first satellite; transmitting a second ranging signal and a fourth ranging signal to the at least one user terminal via the second satellite; retransmitting said first and said third ranging signals back to a gateway station via said first satellite; retransmitting said second and said fourth ranging signals back to said gateway station via a third satellite; determining a first delay, a second delay, a third delay, and a fourth delay corresponding to time differences between transmission and receipt of said first ranging signal, said second

ranging signal, said third ranging signal, and said fourth ranging signal respectively; determining a first position of the at least one user terminal in response to said first known location, said second known location, and said third known location and said first delay and said second delay; determining a second position of the at least one user terminal in response to said first known location, said second known location, and said third known location and said third delay and said fourth delay; determining movement of the at least one user terminal in response to said first position and said second position; and redirecting, in response to said movement, said first beam from said first microcell to a second microcell.

Dependant claims 6-12, and 17-20 are allowable for the same reason.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Threadgill et al (US Patent No: 6,636,721) disclose "Network engineering /systems system for mobile satellite communication system".

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuoc H Doan whose telephone number is 703-305-6311. The examiner can normally be reached on 9:30 AM - 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Maung A Nay can be reached on 703-308-7745. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phuoc Doan

NICK CORSARO
PRIMARY EXAMINER